

Summary

The GS023, GS030, and GS045 have a discharge resistor (R6) (**part number 10633774**) that is external to the inverter. This discharge resistor helps bleed off harmonic noise and residual power from the DC bus on the inverter. An open discharge resistor circuit could cause the inverter's DC bus to retain residual voltage or floating reference levels after power-off and during power-on. A direct short from the motor to the chassis of the machine eliminates the controlled resistive path to Earth.

This can lead to the following conditions:

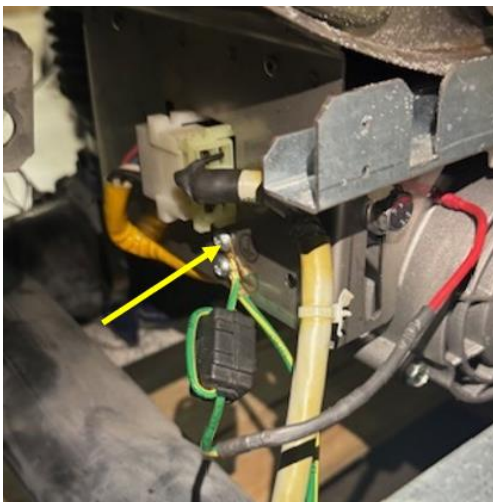
- Incomplete or unstable inverter initialization.
- Erratic start up behavior (for example, water filling without drum rotation).
- EMC/ noise related issues affecting the control electronics (extended cycles, program loss, abnormal machine behavior).
- Random alarms.
- Increased electrical stress on the inverter, potentially leading to premature failures.

When to Test the Circuit

- Anytime that you are performing maintenance on the back of the machine and have the back panel off.
- Anytime you perform maintenance on the motor.
- Anytime there is an inverter related issue.

Testing the Circuit

1. Disconnect power. Wait about 5 minutes for any residual power to dissipate.
2. Set your multimeter to Ohms to take a resistance reading.
3. Take one lead of your multimeter and touch the screw on the chassis of the machine (yellow arrow). Take the other lead and touch the housing of the motor (yellow circle).
4. You should read about 470 K Ω +/- 5%.
5. Verify that your machine is properly grounded to Earth through your electrical connection.



***** Always follow the warnings and procedures in the corresponding equipment instruction manual.*****